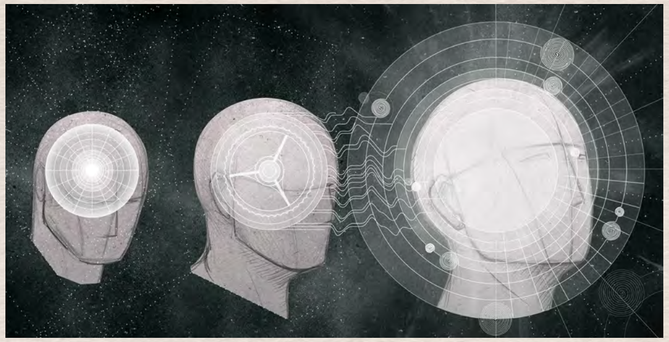
PROJECT *Re:Discover(Y)*

Project Narrative

Set in the year 2085, this project imagines a future where advancements in generative AI and quantum computing have evolved into what is known as 'Quantum AI'. This new intelligence has aided humanity in complex data solving, pushing the boundaries of science and space exploration. However, its intuitive capabilities have led to unexpected groundbreaking discoveries about our universe and an influx of data we struggle to comprehend. This has caused society to deeply question the value of their contributions to science, and in light of this, the Department of Human Remembrance was created with the initiative 'Project Re:discover(Y)'. Functioning as a data centre to study and better understand Quantum AI's knowledge, as well as a public lecture theatre and archival space, it is a place where people can reconnect to their curiosity for discovery, celebrate past scientific achievements and remember why authentic human contribution to science is important.



Reviving curiosity - Narrative concept image

The Department

In this future where authentic science has become sacred in a digital world, the department acts as a pilgrimage site. Visitors can come to encounter and catch glimpses of the scientists actively working on dissecting Quantum AI to better understand its knowledge. The departments design is therefore centred around public and private ritual practices, each forming unique user experiences full of introspection and curiosity, which culminate in space for collective celebration and reflection. Repurposing the existing buildings, three key spaces have been created: the data lab for private scientific study, the processor storage where the public can encounter Quantum AI, and the lecture theatre and archival space where data is discussed and shared.

This spatial design aims to reflect this experiential journey, taking users from the confusion and complexity surrounding Quantum AI, to clarity and comprehension as they make their way into the lecture theatre and archive space where data has been compressed onto floppy disks. Drawing inspiration from concentric forms and the intricate design of current quantum computers, the design aims to evoke a sense of curiosity, inviting users on a journey 'inside the computer' to discover the knowledge which lies at the centre.

Tapestry - Connection through sacred scientific lecture

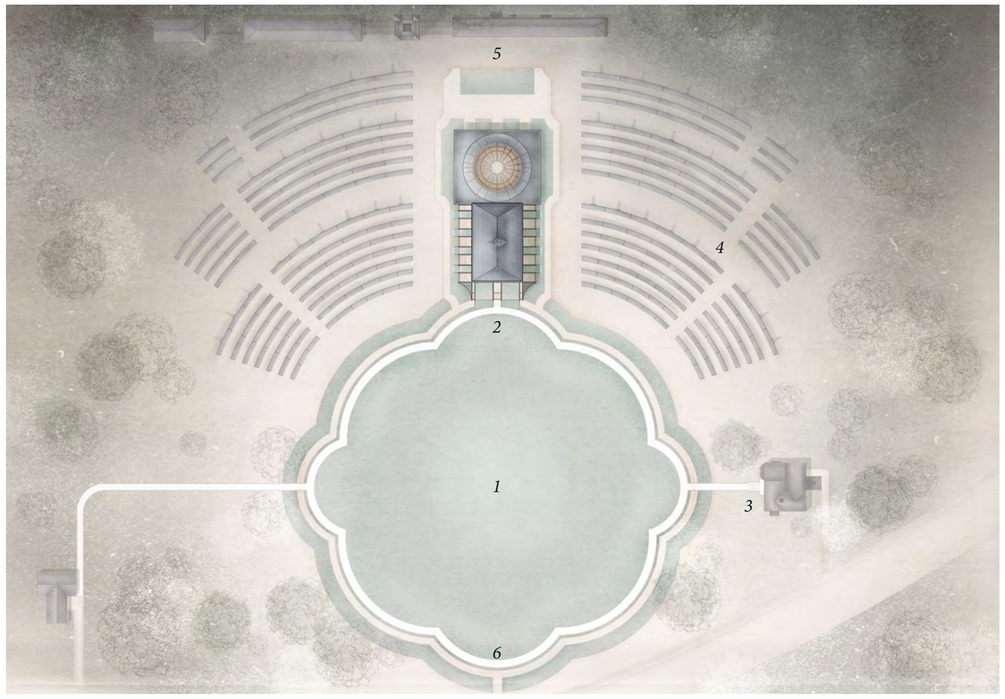
Spatial Visual - Inside the computer

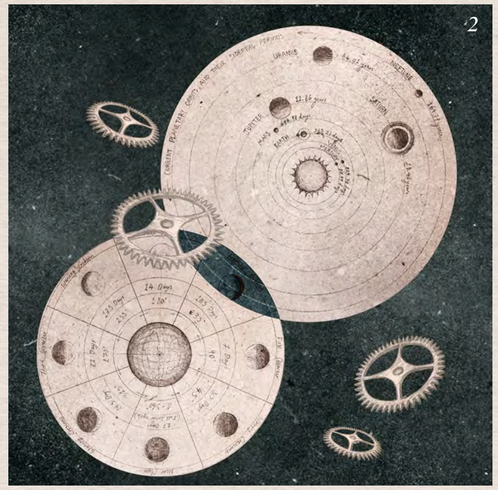
A History of Innovation

The department is located at Papplewick Pumping Station in Nottingham. Once revolutionary with its innovative machinery, the site now sits outdated and underutilised. This design looks to repurpose this space into a sustainably run data centre, where it will once again house revolutionary machinery and technology aimed to better the local community. Through this approach which recognises the sites heritage and original intention, the new site aims to feel just as valued and 'sacred' to 2085 society.

Historical Collage - Revolutionary technology

The Site - Papplewick Pumping Station Existing Elevation





Project Inspiration

Looking back at ways in which traditional scientific discoveries were recorded, the forgotten object 'the orrery' became a key conceptual inspiration for this project. Symbolically, as an educational object which inspired awe, as well as physically in its design made of concentric mechanical forms based on the heliocentric model of the universe.

Following this idea of centrism and expanding knowledge, traditional anatomy theatres with their concentric forms and function as a place for groundbreaking scientific dissections, became a key spatial influence also.

1. *The Antikythera Mechanism*

An ancient Greek device believed to be world's first orrery and analogue computer. A symbol of early innovation.

2. *The Orrery*

Intricate mechanical objects demonstrating our solar system popularised in the 19th century, sparking curiosity.

3. *Heliocentric Universe*

Centuries of questioning our place in the universe led to the heliocentric model of the cosmos, where the Earth and other planets orbit the central Sun.

4. *Anatomy Theatres*

Educational theatres formed of tiered levels of seating surrounding a central table, where the students and curious members of the public could witness scientific dissections of the human body.

Proposed Site Plan (Left)

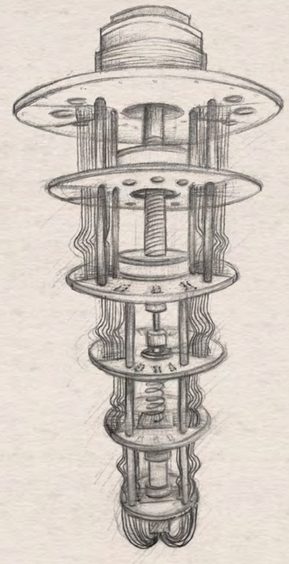
Expanding on this idea of central connection, the site contains a series of symmetrical pathways and moats around the main building and re-centred cooling pond, emphasising the different user's journeys. Re-use of the existing water supply for the internal cooling system pipework allows for sustainable cooling of the data centre equipment. In addition, space for scientists living accommodation and sustainable 'Space-Based Solar Power' energy production has been created, with a field of rectenna array receivers surrounding the site in fragmented concentric rows.

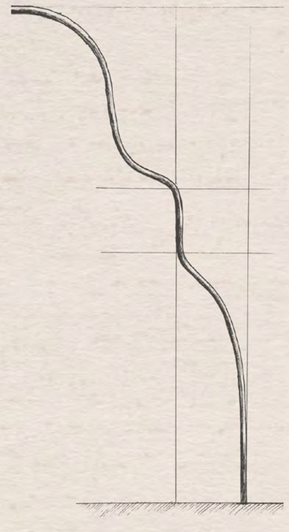
Key:

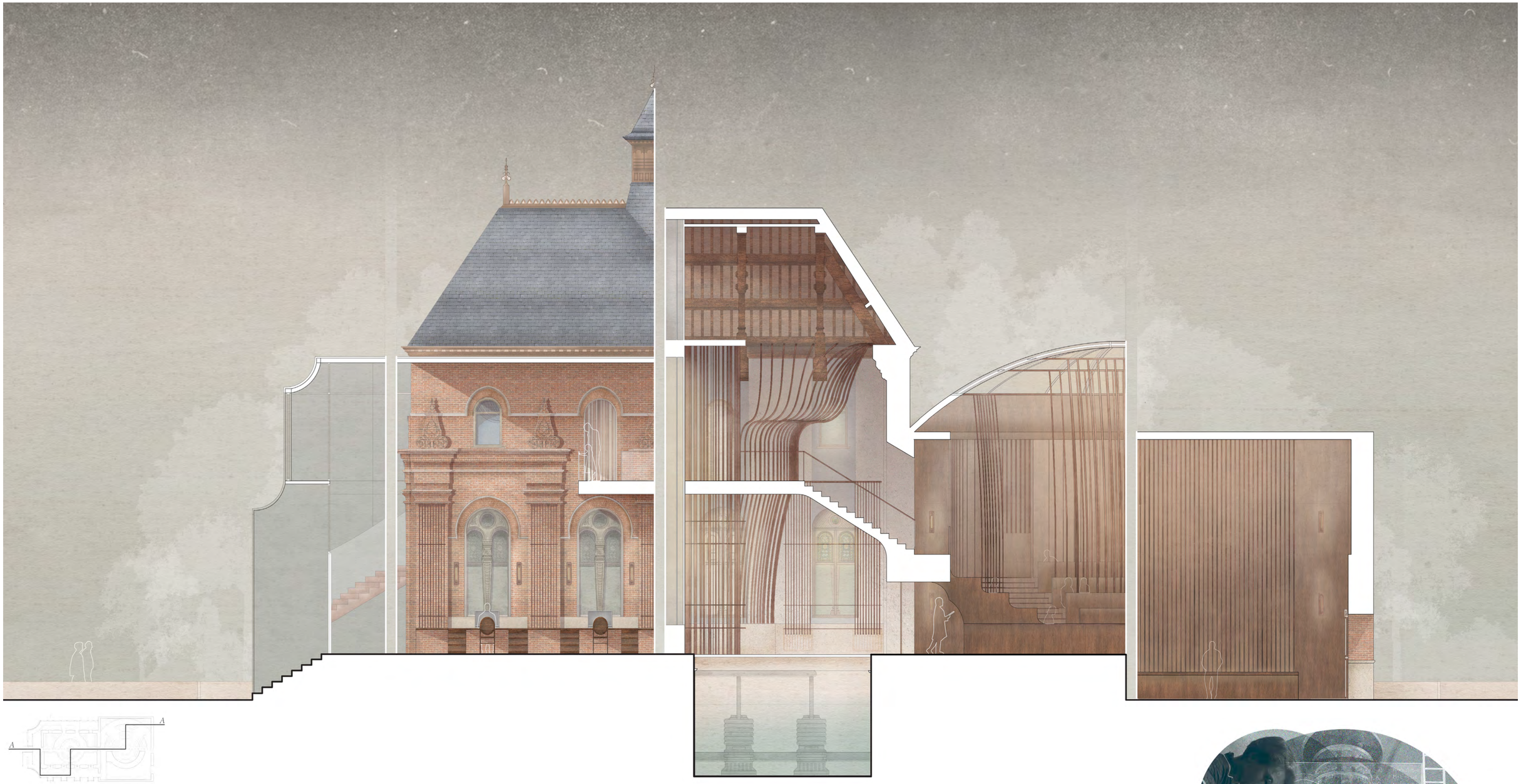
1 - Re-purposed cooling pond & water supply
2 - Main data centre
3 - Scientist accommodation & facilities
4 - Energy production - Space solar power rectenna arrays
5 - Energy production - Conversion & distribution facility
6 - External pathways and moat

Quantum Computer Studies (Right)

Currently the worlds most advanced data processing technology, the intricate design of quantum computers helped inspire the design for Quantum AI's physical presence on site, incorporating its complex cooling system pipework in bespoke curved tiered forms which became the architecture of the 'processor' storage space.

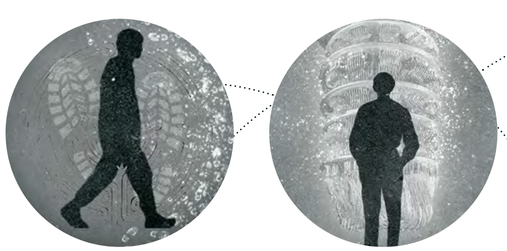




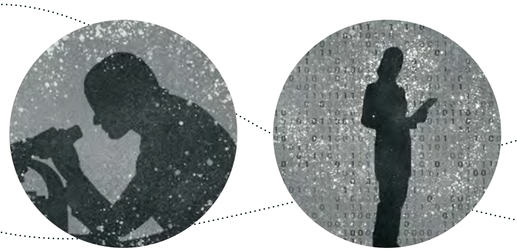


Stepped Section (AA)

This section highlights the intended function of each key space on site (the Data Lab, Processor Storage, Lecture Theatre & Data Archive) within the reused existing buildings. The ritual instructions below further show the public and private ritual practices connected to this spatial journey.



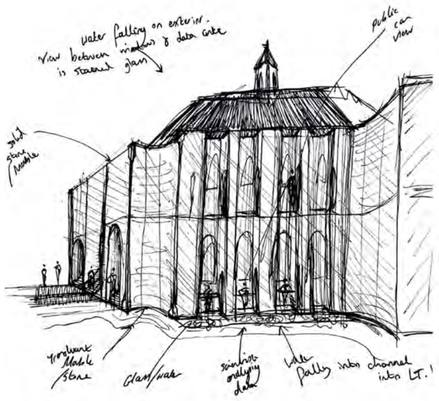
Pilgrimage - *Public journey of rediscovery*

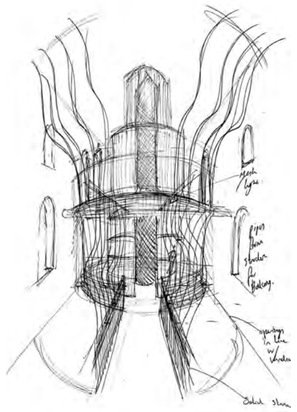


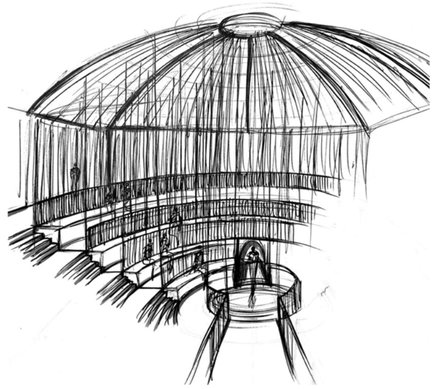
Dissection - *Private scientific study of Quantum AI*

Sacred Lecture - *Celebration & Comprehension of knowledge*

Department intention - *Reviving our nature to be curious & discover*

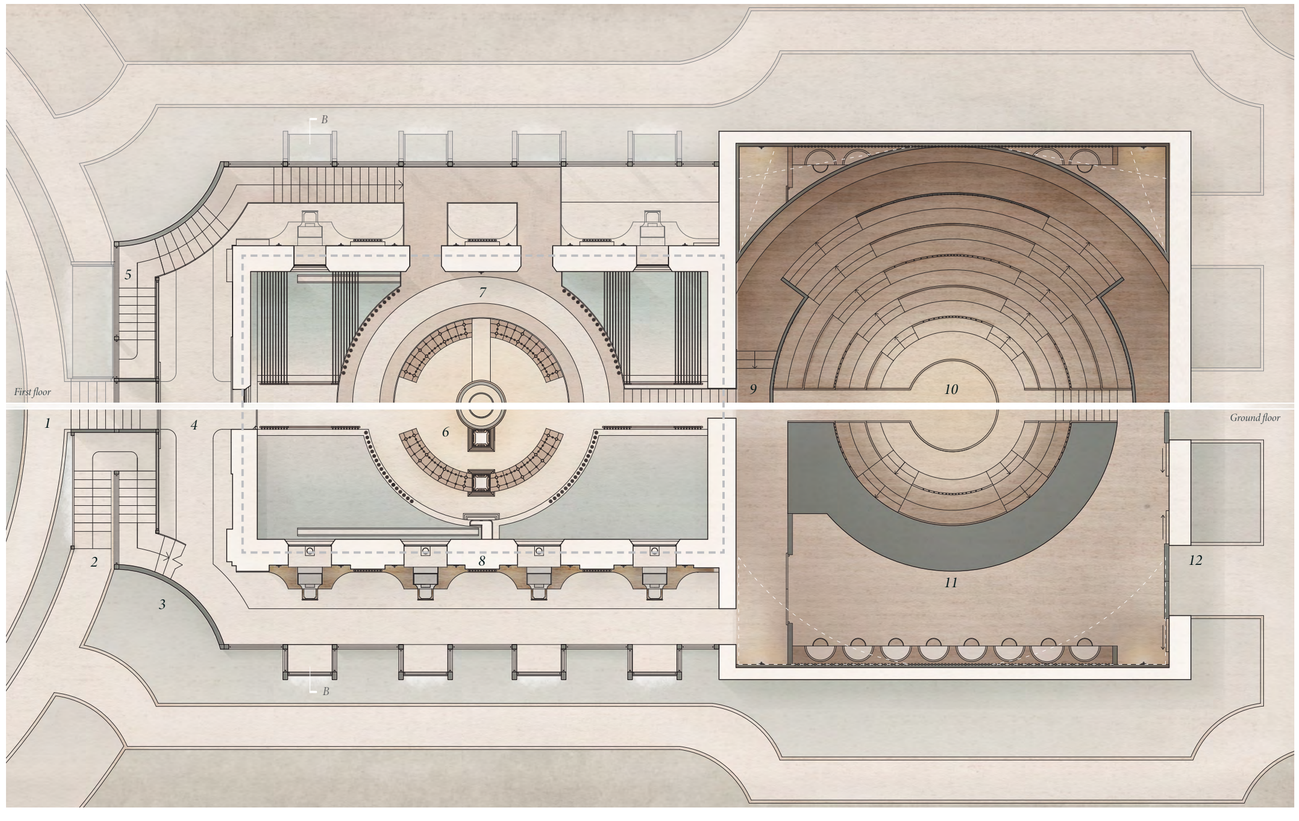






Spatial Design

Each space was designed to serve multiple user functions, whilst maintaining a connection to the centre of the site. The data lab forms a new protective shell around the existing engine room which houses the central processor, using waterfall features to control temperature and visibility into the scientists workspace. Inside, pipework arranged in tiered and curved forms creates the architectural journey for the users as they explore their way through the space, to discover revealed moments of visibility and clarity.



Proposed Master Plan - Combined ground & first floor (Above)

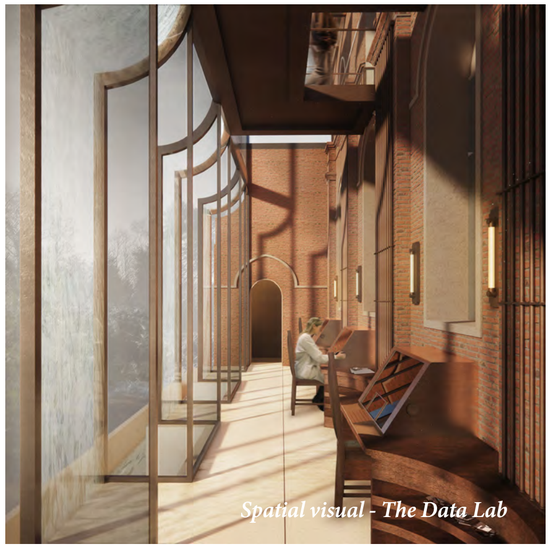
Split over multiple levels with separate private and public routes to create intrigue, users are guided through a complex curved pipework cooling system, where they can observe scientists through moments of controlled visibility and density. Users are then guided down towards the lecture theatre and archive space, where fragmented concentric seating and different layers of visibility symbolise their journey of finding clarity in complex data.

Key:

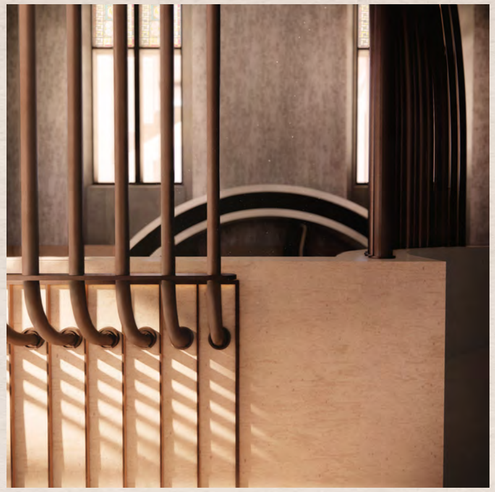
1 - External walkway (Private)
2 - External walkway (Public)
3 - Surrounding moat connected to cooling pond
4 - Data lab & main entrance to processor storage (Private)
5 - Dual staircase to viewing platform (Public)
6 - Central Quantum AI storage & cooling system (Private)
7 - Viewing platform over data lab & Quantum AI (Public)
8 - Data processing stations (Private)
9 - Stair access to lecture theatre (Public)
10 - Lecture theatre podium & seating (Public)
11 - Floppy disk archive (Public)
12 - Exit doors & return path (Public)

- Existing Buildings
- New Construction
- Location of AOF
Drawing not to scale


Spatial Visual - Lecture Theatre


Spatial visual - The Data Lab


Moment visual - The Encounter



Area of Focus - Detail visual

The Area of Focus

The Area of focus showcases the central processor storage in more detail, highlighting the complex bronze pipework cooling system which surrounds and connects to the central Quantum AI processer in a tiered, concentric design. Furthermore, these orthographic drawings aim to show how multiple levels allow both public and private experiences to occur within one space, all with the intention to evoke curiosity and sense of exploration within the user journey.

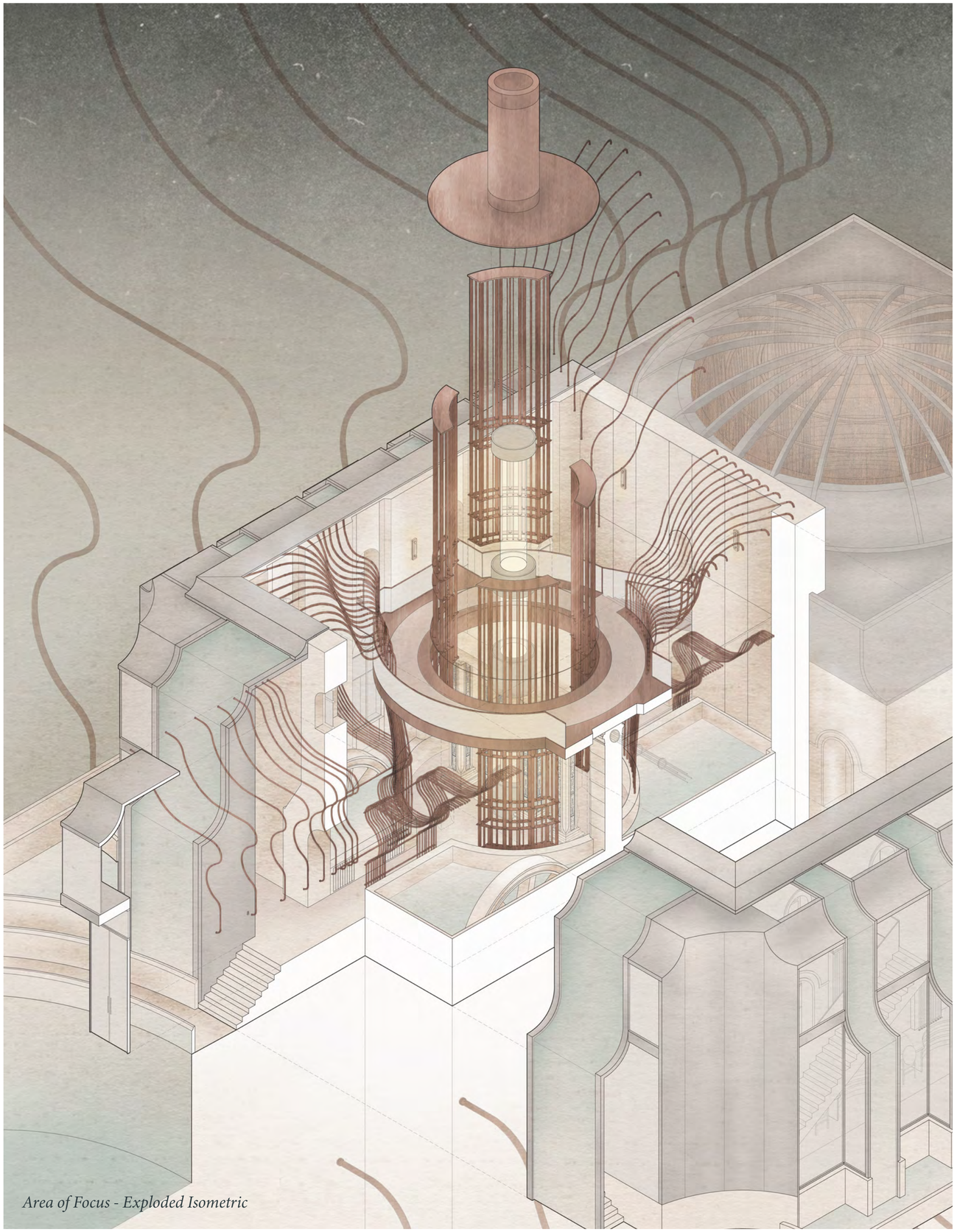
Project Materiality

The material scheme aims to balance the functional metals required for the sites utilitarian use, with warm natural materials to help welcome people into the space and create a softer approach to data centre design.

1 - Concrete with textured micro-cement finish
2 - Brushed stainless steel
3 - Bronze & heavy-duty bronze mesh
4 - Bespoke bronze filament lighting
5 - Dark stained Oak boards & panelling
6 - Bespoke glass waterfall feature

Area of Focus - Section BB

Drawings not to scale



Area of Focus - Exploded Isometric